



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,118	02/03/2006	Norbert Holl	2732-167	8956
6449	7590	06/28/2010		
ROTHWELL, FIGG, ERNST & MANBECK, P.C.			EXAMINER	
1425 K STREET, N.W.			BITAR, NANCY	
SUITE 800				ART UNIT
WASHINGTON, DC 20005				PAPER NUMBER
			2624	
			NOTIFICATION DATE	DELIVERY MODE
			06/28/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/528,118	HOLL, NORBERT	
	<b>Examiner</b>	<b>Art Unit</b>	
	NANCY BITAR	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 30 March 2010.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-23 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-23 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 16 March 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments files 3/30/2010, with respect to the rejection of claims 1-23 have been fully considered and are persuasive. The 35 USC 103(a) rejections of claims 1-23 has been withdrawn. Examiner is still maintaining her rejection based on the primary reference Laskowski et al (US 6,101,266) since Laskowski et al clearly discloses determination the condition and value of a bank note based on measurement of intensities of light that are reflected and transmitted through a bank note and the correlation between the sensed value and the stored value are identified. Examiner is using a new secondary reference to teach the sum intensity value for the reflectance and transmission value for each measuring place. Therefore, a new ground of rejection that still includes the primary reference but in view of Mennie et al (US 2007/0095630) is presented.

### **Examiner Notes**

2. Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the

references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskowski et al (US 6,101,266) in view of Mennie et al ( US 2007/0095630).

As to claim 1, Laskowski et al teaches in figure 1 a method for checking a document of value , with which the document of value for soiling and spots , comprising the steps of: illuminating with an illuminating system at least in a partial area ,( each spot sensing assembly includes four emitters 32each of the emitters produces radiation at different wavelengths, figure 1) and capturing with a detector system at one or more measuring places (2) (entry end 14 to an exit end 16, figure 1, column 5, lines 54-66) the intensity of the light transmitted through the partial area of the document of value and the intensity of the light reflected ( a control circuit 24 produces sensed values that correspond to the detected radiation), or remitted by the partial area of the document of value wherein for each measuring place the intensities of the transmitted and the

reflected light are summed up to obtain a sum intensity ( the reflectance detector 20 is in operative connection with, and outputs first signals and a second signal, column 6, lines 1-12 and abstract), and the sum intensity value for each measuring place is each compared to a predetermined standard value ( the control circuit calculates a level of correlation between the stored values and the sensed values , column 5, lines 54- column 6, lines 1-12, see figure 4; by comparing the correlated values to threshold values , the control circuit is operative to determine the type of note and other conditions such as if a note is worn, soiled, or a double note). While Laskowski et al meets a number of the limitations of the claimed invention, as pointed out more fully above, Laskowski et al fails to specifically teach the reflected light are summed up to obtain a sum intensity value and the sum intensity value of each measuring place is each compared to a predetermined standard value. Specifically, Mennie teaches in figs. 2 and 3. The scanheads function to detect light reflected from the bill as it moves across the illuminated light strip 24 and to provide an analog representation of the variation in light so reflected which, in turn, represents the variation in the dark and light content of the printed pattern or indicia on the surface of the bill. A series of reflectance signals are obtained across the narrow dimension of the bill, or across a selected segment thereof, and the resulting analog signals are digitized under control of the CPU 30 to yield a fixed number of digital reflectance data samples. The data samples are then subjected to a digitizing process which includes a normalizing routine for processing the sampled data for improved correlation and for smoothing out variations due to contrast fluctuations in the printed pattern existing on the bill surface. Mennie teaches the optical

encoder 32 .Moreover, figure 20 teaches determining the denomination of a bill based on the location of a security thread. At step 510, a bill is scanned for the presence of a security thread. The presence of a security thread may be detected using a number of types of sensors such as optical sensors using transmitted and/or reflected light, magnetic sensors such as the full array magnetic scanhead illustrated in FIG. 19, and/or capacitive sensors. Paragraphs 38-42 describe use of detection of a border portion of a bill, which is considered to include the front and back edges of the bill, or a bill feature, by photodetector (26 or 140a-f), which is considered a scanhead (260), and can be used in conjunction with encoder (32 or 278) to determine position of the bill, and thereby turn on or off various scanner optical or magnetic sensors, as discussed at paragraphs 35, 40, 41 and 52, lines 5-18, for example. Note also that paragraph 93 discloses that optical sensors may be used for detecting the location of security threads. Such a position can be considered a single property, i.e., a first property. An optical sensor necessarily detects transmitted light. Paragraph 38 further describes encoder (32) as an "optical encoder", which is another form of optical sensor. Paragraph 39 mentions that the photodetector (26) detects the start of the printed pattern of the bill. Note also that the photodetector will inherently detect the edge of the sheet, as the sheet will begin to obstruct the transmitted light striking the photodetector. Also, paragraph 53, lines 1-10, discusses measuring the length and width of the bill. Regarding a front image sensor and a back image sensor, note that Mennie discloses both scanning heads (18a) and (18b), as illustrated in figure 2, which can be construed as front and back, or scanning heads (260) and (262), as illustrated in figure 3, which

can also be construed as front and back. Note again, that paragraphs 35 and 79 mention that a single scanhead can have both optical and magnetic sensors. Paragraph 52, lines 20-23 mentions that bills have tolerance variances in the printed images they exhibit. It would have been obvious to one of ordinary skill in the art to use the banknote discrimination device and sum up the brightness and compare each sum intensity with a predetermined value in Laskowski for the purpose of obtaining accurate measurements to determine the genuineness of a particular banknote and thus reduce fraud. Therefore, the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention by applicant.

As to claim 2, Laskowski et al teaches the method according to claim 1, characterized in that the intensity values captured from the measuring place or the individual measuring places are corrected before the summation for compensating locally differing measuring conditions ( column 17, lines 17-32; see also Mennie et al figure 11a-11b).

As to claim 3, Laskowski et al teaches the method according to claim 2, characterized in that the correction is effected for compensating local intensity fluctuations in illumination given when measuring ( column 17, lines 17-32).

As to claim 4, Laskowski et al teaches the method according to claim 2, characterized in that the correction is effected for compensating locally differing detector specifications (figure 2, 22).

As to claim 5, Laskowski et al teaches the method according to claim 4, characterized in that each captured intensity value before the summation is reduced by

a dark current measuring value determined for the respective measuring place (note that correlation values calculated may be tailored to note properties and area of interest, column 10, lines 1-3; see also Mennie et al figure 10, paragraph [0084]).

As to claim 6, Laskowski et al teaches a method according to claim 5, characterized in that for determining the dark current measuring values intensity measuring are effected with switched-off illumination (all the blue emitters go off and all the green emitters in each of the spot sensing assemblies come on, column 7, lines 6-21; see also Mennie et al [0076-0078]).

As to claim 7, Laskowski et al teaches a method according to claim 1, characterized in that each captured intensity value, is multiplied with a correction factor determined for the measuring place of the respective intensity value (These overall values are then multiplied together to calculate a final value indicative of correlation of the stored value set and the test note, column 9, lines 41-48)

As to claim 8, Laskowski et al teaches a method according to claim 7, characterized in that the correction factors are obtained on the basis of the intensity values, which are determined by means of intensity measuring in reference documents ( column 23, lines 53 to column 24, lines 1-9 ).

As to claim 9, Laskowski et al teaches a method according to claim 1, characterized in that the document of value in a transportation direction is guided past an illumination system and a detector system positioned to this, and with the illumination system at least on one side of the document of value an illumination profile is produced, which extends transverse to the transportation direction (see figure 2-3, note that FIG.

14 is a graphical representation of reflectance signals obtained from transversely disposed spot sensing assemblies for a skewed note, which signals are used by the control circuit to determine an angle of skew; see also Mennie et al paragraph [0084-0086]).

As to claim 10, Laskowski et al teaches a method according to claim 9, characterized in that with a plurality of detector elements, which are positioned in a row at right angles to the transportation direction( see figure 9 ) , the intensity values along a plurality of measuring tracks extending in parallel to the transportation direction are captured ( note that the control circuit 24 has the advantage that each of the digital signal processors operates in parallel on the master templates stored in its associated memory; see also Mennie et al, paragraph [0112-0115] ).

The limitation of claims 11-13 has been addressed above see Laskowski figure 2 and 3

Claims 13-22 differ from claim 1-12 only in that claims 1-12 are method claims whereas, claims system claims. Thus, claims 13-22 are analyzed as previously discussed with respect to claims 1-12 above.

As to claim 23, Laskowski et al teaches the method of claim 7 wherein each said captures intensity value is reduced by a dark current measuring value (all the blue emitters go off and all the green emitters in each of the spot sensing assemblies come on, column 7, lines 6-21; see also Mennie et al paragraph[0110-0112]).

## Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NANCY BITAR whose telephone number is (571)270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on 571-272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nancy Bitar/  
Examiner, Art Unit 2624

/Wes Tucker/  
Primary Examiner, Art Unit 2624